MODERNISM AND TRADITION

The new practical requirements resulting from changes in the ways of living and of conducting business have to be met by present-day designers and a suitable architectural expression has to be given to these requirements.

There is a strong effort on the part of many architects in this country to produce architecture that is vital, in fact they feel themselves practically compelled by the advances and changes in the world around them to produce designs better suited to our times and needs than the scholastically correct buildings produced a generation ago and still admired for the scholarship they display.

In this striving after a new expression in architecture American architects as a rule make full and intelligent use of the rich store of historical design inspiration handed down to them by the architects of past generations. They are more inclined to a broad eclecticism and to the free interpretation of traditional design than to radical independence. Their sound training usually prevents them from committing the excesses indulged in by some of the extreme modernists among European designers.

In solving their problems some architects, notably the extremists in Germany and in countries where the German influence is strong, have turned completely away from tradition and sought to build up a method of architectural design entirely independent of everything that the past has to offer. They have produced some designs that look more like battleships than buildings, and many that look utterly unlike anything ever seen or imagined before. They have done this by what they believe to be the logical development of the design in terms of the materials of construction. Many of these buildings are of concrete and have the appearance of having been cast in a mould rather than of having been built. Some of these designs were shown at the Architectural Exposition in New York last spring and not long ago much space was devoted to designs of this kind by one of the leading British architectural journals. These things are interesting as experiments, weird looking as some of the results may be.

The buildings of the Exhibition of Modern Decorative and Industrial Arts, now open in Paris, show many varieties of Modernism in their design, ranging all the way from the plain cubical Pavilion of the Soviet to the French, British and Italian Pavilions with their distinctive styles of modern treatment. The entrance to the Exposition shows an attempted compromise between pure Modernism and the architecture of the Grand Palais and the Petit Palais, between which this entrance lies. The Exposition is a highly interesting conglomeration of extremist architecture from all over Europe—such an assemblage as has never before been brought together, a riot of Modernism.

The chief style characteristic of practically all of these buildings is the set of mannerisms that has come to be regarded as the basis of the Modern Style, starting with the work which Professor Hoffmann, of Vienna, and Peter Behrens and others did some twenty-five years ago.

Nevertheless, each of these buildings is strongly marked by the national characteristics of the people it represents. This is due partly to a free expression of national taste in form and coloring and partly to the use in a modified way of elements found in the historic design work of these nations. However, it is all embryonic, to say the least, and there is apparently too great a conscious effort to do something different.

A much better way, in theory at least, of attaining a high degree of Modernism is the plan of procedure outlined some twenty-five or thirty years ago by Victor Horta, head of the Art Institute of Brussels for practically a life time. Dr. Horta advised the thorough understanding of practical modern requirements and a thorough study of methods of construction. In addition he advised the analytical study of historic design with a view to gaining an understanding of the basic principles which underlie such design. He proposed that the architect, having had this training, should design not only in accordance with the practical requirements, and the nature of the material but in conformity with the basic principles of good design revealed by the work of the past. Good as Dr. Horta's theory was it seems never to have brought any significant practical results in application. The work of extreme modernists or those who are attempting to make themselves independent of the past, forces upon us the conviction that no man or group of men can create in a lifetime a manner or group of men can create in a life time a manner of architectural expression approaching the excellence of the work produced by those who make proper use of the traditions that have been gradually developed and handed down through thousands of years. It seems to be in the effort to produce good ornament and detail in general that the man who cuts loose from traditional sources of inspiration fails most seriously.

Somewhere between the extremes of ultra-conservatism and of radicalism, undoubtedly lies the right path, which men all over the country are trying to find and follow. It is one of the live questions of the day, this matter of modernism and tradition and we should like expressions of opinion from our readers. Won't you write us an informal letter on this subject?
Perspective of the Royal Italian Embassy, Washington, D. C.
Warren & Wetmore, Architects.
THE PRODUCTION AND HANDLING OF DRAWINGS

BY H. DESMOND UPTON

IN an office doing a general practice and not confining its work to a standardized special type of building, there can be no set drafting room practice in connection with the preparation of the drawings and specifications.

There must be, of course, the fundamental principles that obtain in any well ordered architect's office which require that work be handled in a business like manner, with due dispatch and by competent people, and that the artistic side is neither neglected nor allowed to run wild to the confusion of the job. In other words, the interests of the client must be protected and the contractor held to a fair and correct interpretation of his obligations.

The steps of development may be classified broadly as comprising: (1) sketches, (2) preliminary drawings and preliminary specifications, (3) final working drawings, details and specifications for estimate and contract, (4) further scale details and all full size details necessary for the contractor's information to complete the building.

On preliminary sketches the draftsman must have the following information:

1. General program of Owner's requirements;
2. Location, size and topography of property;
3. Requirements of all governing laws and ordinances;
4. Approximate limit of cube, based on approximate limit of cost. This will also regulate the choice of materials and will influence the character of the design. The Owner's preference in design should be ascertained, especially, if some particular building or buildings embody the Owner's preference in architectural treatment and materials.

When the sketches have been developed far enough to determine the general scheme, the preliminary working drawings can be started safely at large enough scale to allow more detailed study including the structural and mechanical engineering work. These drawings will be the basis of the final working drawings and with preliminary specifications will also serve for preliminary estimate, if wanted.

When all items are sufficiently developed to the Owner's approval, final working drawings, details and specifications for builder's estimate and contract can be produced in minimum time, since the bulk of the study will have been made and there is fair assurance of the general coordination of the architectural, structural and mechanical engineering requirements.

Large scale details that will affect the working drawings should be started coincidently with the working drawings. This will help in reducing the possibility of changes in working drawings and also bring any special problems to the surface for immediate solution.

Specifications should be started as soon as working drawings are blocked out, to allow ample time for materials and finish to be decided before any indications are noted on the drawings. Any special equipment should be taken up immediately with the manufacturers so that all requirements of such equipment involving other trades can be provided for in the plans and specifications.

Information and instructions affecting the drawings or specifications should preferably be in memo form, in duplicate or more copies—one copy to the draftsman in charge of the drawings, one to the specification writer and additional copies to the structural and mechanical engineers if their work is affected. By this method, information reaches all persons simultaneously and affords opportunity for back check. It also obviates many discrepancies and conflicts in drawings and specifications.

The procedure in the drafting room, from preliminary sketches to final drawings and details, is a matter of proper administration to see that correct information is furnished promptly to the draftsman, the specification writer, and to the mechanical and structural engineers and that the architectural, mechanical and structural requirements are properly coordinated, and carefully checked against each other to avoid costly alterations and corrections later on—both in the drawings and at the job.

So far as the method of producing the drawings is concerned, this should be systematized to insure uniformity in the quality of the drawings and to produce all the required information without needless repetition or useless elaborating.

Care must be taken to reconcile the varying degrees of drafting ability in order not to have drawings of similar classification show large differences in quality and appearance. While it is not advantageous to the draftsman to be confined to plans only, nor elevations only for all jobs, the work must be arranged so that, for a given job, the plans have as uniform a quality as possible and likewise for elevations and details. This is not for a matter of appearance, but to preclude items of importance being overlooked, due to the varying drafting ability, as the quality of draftsmanship is often an index to the attitude of mind of the draftsman as to what matters are of the most importance—the design or the construction and practical requirements of a building.

Working drawings and details being essentially instruments of trade, they must be clear and intelligible. Any repetitions or unnecessary indications that tend to confuse the drawings must be suppressed. Neatness and accuracy of draftsmanship

(Continued on Page 53)
Preliminary Drawing, Main Elevation—The Royal Italian Embassy, Washington, D.C. Warren & Wetmore, Architects.
Preliminary Drawing, First Floor Plan—The Royal Italian Embassy, Washington, D. C. Warren & Wetmore, Architects.
PENCIL POINTS

Preliminary Drawing, Second Floor Plan—The Royal Italian Embassy, Washington, D. C.
Warren & Wetmore, Architects.
Preliminary Drawing, Second Floor Plan over the Chancellery and Garage—
The Royal Italian Embassy, Washington, D. C.
Warren & Wetmore, Architects.
Working Drawing, Main Elevation—The Royal Italian Embassy, Washington, D.C.
Warren & Wetmore, Architects.
Working Drawing Details of Main Elevation—The Royal Italian Embassy, Washington, D.C.
Warren & Wetmore, Architects.
Working Drawing, Second Floor Plan—The Royal Italian Embassy, Washington, D. C.
Warren & Wetmore, Architects.
TRANSMITTAL OF DRAWINGS, PRINTS, SPECIFICATIONS, ETC.

BUILDING

TO (NAME)

(Address)

DEAR SIR:

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Sent you for the following reasons:

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YOURS TRULY,

Printed Form for Transmittal of Drawings, Prints, Specifications, etc.
(Continued from Page 43)

are essential but nothing is gained for the client by producing elaborate drawings of the “engraving” type and often excess zeal in drafting will tend to increase the estimates of cost submitted by contractors. It certainly increases the architect’s drafting cost and the length of time required to complete the drawings. This last item is an important factor where the Owner has heavy carrying charges to consider as part of his financing.

The drawings for the Royal Italian Embassy at Washington, D. C., which are reproduced herewith, illustrate the development from preliminary drawings through to finished details. In this particular building, however, it was deemed advisable to make the working drawings of the elevations complete in repetition of detail, ornament and window sash, etc., on account of their being submitted to a foreign government for approval. Ordinarily, much of this repetition could be eliminated and covered by notes, such as “Continue all ornament”, “Repeat sash and frame as at A”, etc.

Much time can be saved by furnishing the draftsman with details or drawings from other jobs covering similar problems of construction in arrangement for his guidance and information and there is no necessity to build up drawings independently for each job. In this way draftsmen of lesser experience can be utilized for some of the incidental detailing, such as windows, doors and interior trim, except, of course, where special study is required to meet special conditions.

When revisions are contemplated in the working drawings after the building contract is let, it is advisable to make these changes on the contract drawings until estimates have been obtained and approved. For this purpose, the contemplated changes should first be shown on “change sheets” or “Change Records.”

These drawings, if made directly from the contract drawings, showing the change together with enough of adjoining unchanged work to properly locate and explain the proposed revision, can be issued for estimate and so marked and, if approved, can be marked and issued as a “paster” to the contract drawing to all concerned. This procedure definitely identifies the change and forms a permanent contract record. It also reduces the expense of blue printing as it is not necessary to reissue prints of the entire drawing affected by the change.

As soon as a Change Record is issued as a contract drawing, the original contract drawing should be revised. This work can be done by a junior draftsman as it is a matter of erasing on the contract drawing and tracing from the Change Record.

The contract drawing is then marked as “Revised August 1st, 1925, Change Record No. 1” and the revision is thereby definitely located and identified. The usual notation put on revised drawings such as “Revised August 1, 1925, stair changes” or some similar vague generality is a constant source of dispute and misunderstanding and should not be allowed on jobs of any magnitude.

A standard schedule of lettering will help to produce a more uniform set of drawings; a standard schedule of materials prevents confusion and errors in indication and reduces the possibility of conflict in drawings and specifications; a standard system of numbering the drawings helps in filing drawings in the office and at the job, as it separates the different classifications such as 3/4” or 5/8” working drawings, scale details, full size details, and all structural and mechanical engineering drawings.

As to identification of drawings; all preliminary drawings that have any value as a record should be identified by a drawing number, job number and date. For this purpose a “preliminary drawing” stamp is useful. All sketches not sufficiently developed to be classed as a preliminary drawing should be identified with the job number, and if such sketches are to be kept for future record, as, for example, on account of Owner wishing further development of the drawings to be delayed or postponed, then a “sketch” stamp, as illustrated, will identify the sketches and facilitate filing.

The segregating of working drawings and details into group classifications and numbering them according to these classifications simplifies the locating of any drawing during the active progress of the job and also for future reference in connection with a completed job, as by this means it is not necessary to go laboriously through an entire drawing list to find a particular drawing.

The drawing number of each sheet should be prominent and the “job” number should be less conspicuous. This prevents the possibility of the contractor confusing the drawing number and “job” number in referring to a blue print, especially if the architect uses a rubber stamp impression on each drawing in place of hand lettering as the impression may be faint due to a poor inking of the stamp and it may be difficult to read on the blue print what each of the two numbers represents.

Shop drawings as soon as received should be given a “received” date and a record should be kept showing when received, when returned for correction or returned approved. This record is valuable in case of any claims for extension of time by subcontractors based on delay in receiving approved shop drawings. It also serves as a check in the architect’s office to prevent delay in the return of shop drawings.

A record copy of each shop drawing folded to a standard size for filing and stamped on a convenient corner with a form stamp giving general information for ready reference permits the immediate location of a required print in the file. At the completion of the job the final approved shop drawings can be quickly refiled for permanent record and all prior prints destroyed.

The use of a printed form (transmittal form) to accompany all blue prints, etc., issued to contractors, made out in duplicate with the particular information as to drawing numbers, specification sheets, etc. and why these prints are issued, saves writing

(Continued on Page 56)
**REVISION RECORD**

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**ARCHITECTS**

NEW YORK

Building No. __________________

Preliminary Drawing No. ____________

Drawn by. ________________

Date ________________

**Figure 1, Revision Record; Figure 2, Issue Stamp; Figure 3, Sketch Stamp; Figure 4, Preliminary Drawing Stamp; Figure 5, Change Record.**
Figure 6, Shop Drawing Stamp; Figure 7, Job Stamp; Figures 8, 9 and 10, Stamps the use of which is self evident.
PENCIL POINTS

(Continued from Page 53)

letters and the carbon copy duplicate kept in a special file for handy reference in the drafting room is a record of what has been issued and the date of issue.

Stamping each print with the date it is printed is a safeguard against the use of obsolete prints, especially when reference is being made to any drawing in telephone conversations.

A notation on the original tracing, filled in each time it is issued for printing, stating to whom the prints are to be sent and the date of such issue reduces discussion at a later date as to the issue of such prints, although it is not, of course, definite proof of prints having been received, and more than compensates for the small amount of time involved in making the notations. For this it is convenient to apply an issue stamp to each tracing when made and to enter in ink on the tracing the name of the firm or person to whom prints are issued each time before the tracing is sent to the printer.

A proper filing system for all drawings and the employment of a competent person, with assistants if necessary, to keep it in proper working order, is a necessity that increases with the volume of work being handled in the office. This applies not only to active jobs, but also to completed ones and permits obtaining useful data from other jobs that would otherwise have to be worked out anew for each building. Such a filing system, if worked to full advantage, will more than pay for itself in the reduction of cost of production and in time saved.

These are a few of the essentials in drafting room practice, and they apply in general to all offices—large and small. The degree to which they are developed depends on the size of the office and the amount of work being handled. These principles apply, of course, only to the mechanical means of producing the work. This article is not intended to enter into the question of office morale which must be maintained at a high level otherwise the whole production in the drafting room will suffer both materially and aesthetically.

The Royal Italian Embassy, Washington, D. C.
Warren & Wetmore, Architects.
DRAWING BY SAMUEL V. CHAMBERLAIN
THE CHURCH, L'ISLE-SUR-SORGUE, FRANCE.
On the other side of this sheet is reproduced a delightful drawing from the collection which Samuel V. Chamberlain recently brought back with him as a result of a European trip. There is an admirable quality in the pencil work that gives this drawing value in addition to that which attaches to it as a good presentation of an interesting architectural subject. Through the courtesy of Mr. Chamberlain we shall present other of his sketches in succeeding issues.
A masterly study of detail by Edward H. Bennett for a design entered by him in the Concours Godeboeuf at the Ecole des Beaux Arts in Paris is shown on the other side of this sheet. The freedom and expressiveness of the pencil work is worthy of note. The architectural forms are drawn in a way that shows the possession of a rich store of architectural knowledge by the designer and a remarkable ability to visualize his design. Other drawings by Mr. Bennett can be found in the August issue in the article Master Draftsmen, XIV, Edward Bennett.
An extremely fine life study is the etching by Emil Fuchs reproduced on the other side of this sheet. The way in which the figure has been expressed by the use of sensitively drawn outlines almost exclusively is deserving of careful study. These outlines suggest the character of the surfaces they bound, a most difficult thing to accomplish.
DRAWING BY WALTER B. CHAMBERS
MT. ST. MICHEL.
A quaint bit of Mt. St. Michel is well rendered in the drawing by Walter B. Chambers shown on the other side of this sheet. This drawing was made in 1889 on one of Mr. Chamber's early trips abroad. It shows a delightful study, as well as earnestness—the kind of drawing that it is well for a student to make. Another of Mr. Chamber's sketches of Mt. St. Michel appeared in the previous issue.
HENRY HORNBOSTEL AND ERIC FISHER WOOD WIN COMPETITION FOR HARDING MEMORIAL.

The commission to design the mausoleum to be erected in memory of President Harding, at Marion, Ohio, has been awarded to Henry Hornbostel and Eric Fisher Wood. The Jury of Award met on July 20, at the offices of the professional advisor to the Harding Memorial Association, E. P. Mellon, of New York, to consider the designs submitted by the architects, architectural firms and associated architects who had been invited to take part in this competition, namely: Messrs. Paul Philippe Cret, of Philadelphia, Pa.; Henry Hornbostel and Eric Fisher Wood of Pittsburgh, Pa.; John Russell Pope, of New York; and Egerton Swartwout of New York. It was the desire of the Executive Committee of the Association that the judgment be made upon the professional and artistic capacity of the author for dealing with this especial problem as regarded from all points of view, including that of cost.

The program called for a memorial to be erected to Warren Gamaliel Harding by The Harding Memorial Association in the form of a mausoleum at Marion, Ohio. An area of ten acres is provided for the memorial but only that part of this lot that in the judgment of the competitor is desirable as a setting need be included in the design. The cost of the mausoleum, and all expenses incidental to the building, was fixed at six hundred thousand dollars. A. D. Taylor, of Cleveland, Ohio, has been designated by the Harding Memorial Association as landscape architect. It is understood that, although the landscape architect is engaged and paid by the owner, his function shall be distinctly subordinated to that of the architect of the mausoleum and that the landscape architect shall cooperate with him in designing the treatment of the site and of the roads leading to it. The drawings called for by the terms of the program were:

A. A general plan showing the mausoleum in block form and the treatment of the approaches at the scale of 1/40 in., rendered.
B. A plan of mausoleum entrance level or, if desired, showing one-half at that level, the other half at an upper or lower level, at the scale of 1/8 in., not rendered.
C. One main elevation at the scale of 1/8 in., rendered.
D. Another elevation at 1/8 in., not rendered.
E. A section through the mausoleum at the scale of 1/8 in., rendered.
F. A cubage diagram on tracing cloth, agreeing in all respects with the dimensions of the building as shown in the design, and showing these dimensions in figures, with schedules giving the area, height and volume of each part to be included in computation of volume and their total in cubic feet.

The three drawings noted above as rendered to be essentially in monochrome, elevations and sections to show a single human figure 5 ft. 8 in. high.

On pages 65 through 73 we reproduce three of the rendered drawings from the set submitted by each of the competitors in this competition.
Design Submitted by John Russell Pope in the Competition for the Selection of an Architect for the Harding Memorial.
Design Submitted by John Russell Pope in the Competition for the Selection of an Architect for the Harding Memorial.
Design Submitted by Paul P. Cret in the Competition for the Selection of an Architect for the Harding Memorial.
Design Submitted by Egerton Swartwout in the Competition for the Selection of an Architect for the Harding Memorial.
Section.

Plot Plan.

Design Submitted by Egerton Swartwout in the Competition for the Selection of an Architect for the Harding Memorial.
Figure 1. Drawing by Emanuel Brune. "Fragments Divers," Cori.
THE TECHNIQUE OF RENDERING, PART IX

BY FRANCIS S. SWALES

The brilliant pigmentation of Mr. Magonigle's drawings of the Kansas City Peace Memorial*, made to present as forcefully as possible the artist's conception of the general treatment of a great monumental group of buildings, brings to attention the strong part that foliage and other naturalistic elements may play in the effective presentation of the ideas and feeling of the designer. The dramatic touch of the artificial lighting of the procession in the foreground of the perspective, the vivid impression of sunlight brought about by the dark points of foliage so placed as to force the white surfaces of the masonry at the base of the elevation; the sharp accentuation of naturalistic points of the foreground, and the architectural lines of the formal clipped trees, which become part of the monumental design that is within the enourage of naturalistic setting, convince the beholder that not alone the architecture but the landscape, sculpture and qualities requisite to the artist-painter are combined in the thoughts and expressiveness of the designer.

The part which foliage may take in the effectiveness of a presentation drawing is a common cause of questions as to advisability. The general theory of teachers of architecture inclines to avoidance of anything naturalistic in combination with the orthographic projectional drawings of architecture. Yet Emanuel Brune, one of the great exponents of that theory and one of the greatest masters of technique himself, resorted to at least suggestions of the combination as in the background of his composition of "Fragments Divers" at Cori (Figure 1), in which the mountain town and suggestion of clouded sky take the part of the back-drop of the stage. But Brune's drawings, while displaying a painter's feeling for lighting and perspective and containing elements of an artist's imagination (as all French restorations of the antique do), are primarily drawings to record facts, or near-facts. The doorway of the Doric Temple (Figure 2), a severe academic study, is relieved of harshness by the naturalistic softening of the shadow of the console at the right and a touch of diffused shade over the left corner creating a sense of space behind the mechanical border framing the drawing. Again in his masterly study of the "Details of the Doric Temple" the glazing of the drawing with strong graded washes of depositing pigment give a naturalistic effect to the texture of the tile roof (Figure 3) and the surfaces of the stonework (Figure 4). The strong settling washes conceal to a great degree the labor showing through the mask of facility. Thus, on the curve of the crown mould of the cornice we can perceive ten parallel washes used to produce the effect of mingling light and shade and the varying degrees of reflected light upon the small horizontal bands in the frieze enable us to know that at least five washes were carried over the lighter parts and nine over the parts in shadow, and all were carefully graded. The small cyma below the crown moulding is ruled off into nine parallel lines and seven separate washes used to produce the lighting effect before the heavy glazing wash, giving to the surface the technique of the water-colorist—the sure touch and right tone with the first brush full—was applied. The study of the Corinthian capital and base (Figure 5) shows prodigious technical work. On the lower torus of the base no less than sixteen bands of diagonal washes can be counted in the shadows above the "white" line spared between the shade and shadow. Only portions of the drawing have been glazed with a softening wash; but

*Illustrated in August, 1924.

(Continued on Page 82)
Figure 2. Drawing by Emanuel Brune. Doric Temple, Cori.
Figure 4. Drawing by Emanuel Brune. Detail of Order, Doric Temple, Cori.
Figure 5. Drawing by Emanuel Brune. Detail, Corinthian Order, Cori.
Figure 7. A Baptistry, Rougevin Prize 1891. Design by A. Guibert.
Figure 6. 1st Medal Design by Frederick Hirons, "Concours Godeboeuf—Une T escente à Couvér."
it has been applied with so much knowledge and skill that the whole rendering seems to have been made with that one final touch—as though genius had covered with a natural touch of age the brand new labors of the hard working mechanic and given it life, as in the story of Pygmalion and Galatea.

The objection to naturalistic effect in connection with the conventional orthographic projection then, must be limited to specific effects which detract from, rather than add to, the architectural character.

Thus, in a study in which detail is of primary interest as, for example, (Figure 6) Mr. Hirons' design for a covered entrance, any introduction of foliage would compete with the interest intended to be centered in the ornamentation while figures in "street clothes" would detract, particularly, from the sculptural decoration. When, as in this case, the drawing is made for the purpose of showing progress in architectural study, the jury is concerned in the design for the given subject only; and in a subject of such minor extent the setting, or color, is of little consequence. Similarly in a subject such as Mr. A. Guilbert's prize drawing design for a "Baptistry" (Figure 7) in which the colored decoration is of first importance and the scale of the interior obvious, the introduction of naturalistic figures could do nothing but disturb the composition. But when the subject goes beyond the questions of detail and proportions, and more especially the location or purpose of the proposed building is such as to call for the consideration of the architecture as the complement to the landscape, the feeling must be strong that we should like to be assured that the landscape will do its part as complement. As soon as landscape becomes part of "the picture" it becomes necessary to consider how far the naturalism of the entourage may be carried in combination with the necessary conventionalism of the architectural representation. Shall the foliage be conventionalized so that it shall appear as simply a background or mass, or be so disposed as to make it an important part of the whole composition or picture? In Mr. Cret's student period, design for a small museum (Figure 8), the idea is obviously the latter. The general idea of forcing the strength of the white centre of the picture, thereby the solidity of the building, by the introduction of foreground trees is the same as in Mr. Magonigle's Kansas City Memorial drawings; but the detail work is not so far advanced. Here again is the mountain town "back-drop" of Brune's drawing (compare with Figure 1) but with the stage set with "profile cuts". The naturalism is conventionally indicated in a way that harmonizes well with the sense of the representation of the building—both are flat. The whole presentation is a remarkably good piece of student work. The use of foliage in similar conventional indication is useful in most of our practical problems for purposes of giving scale to large buildings, a mass against which to place the hard cuts of a section (Figure 9) and to set it forward as a whole, when the general rendering otherwise tends—as is usually the case with sections—to push forward the centre and kill the wings. This drawing, in carbon pencil, with the interior of the dome rendered in an orange (dark in the reproduction), caused the dome to seem to come away forward from the side wings until the dark foliage was added. This took some of the blackness out of the interior columns and intensified the effect of lighting from the interior courts.

Well rendered sections are the exception, not the rule, among architectural drawings. Usually left until the last thing in working up a competition they

(Continued on Page 86)
Figure 10. Portion of Drawing by Otto Eggers. Design Submitted by Office of John Russell Pope, Architect, in the Harding Memorial Competition.
Figure 12. Drawing by Otto Eggers. Portion of the Rendering of the Elevation Submitted by the Office of John Russell Pope, Architect, in the Harding Memorial Competition.
more often betray the weaknesses instead of showing the strength of the design. The problem of showing the actual lighting, while maintaining the conventional shadows from light assumed to come at the angle of the diagonal of a cube, is one of the usual difficulties. Another is to show the reflected light that would come from the floor without breaking the interior into a mass of spots. Still another is how to show such a centrally located mass as the font (Figure 7) in Mr. Guilbert's "Baptistry", or the tomb in the drawing for the Harding Memorial (Figure 10) by Mr. Eggers. In both cases half of the central feature, if shown in elevation, must project forward from the plane of the cut of the section, and would be, therefore, in full sunlight and the most advanced point in the drawing. Yet another difficulty, especially if the building is round in plan, is to keep the outside wall, or column, from appearing to recede from its proper place and plane. This last difficulty can be overcome by the introduction of foliage of a tone of "grey" darker than any part of the building structure. In Mr. Eggers' drawing the washes have been given a charming piqué of pencil work suggesting the leafage just enough to give a contrast of texture between it and the masonry of the architecture.

The late George B. Post, in opposing the submission of perspective drawings in competitions, raised the objection that whoever was (at that time) successful in obtaining the services of Mr. Hughson Hawley to render his perspective was usually successful also in winning the competition. That was in the good old days when a majority of members of the jury were laymen. Nowadays it takes a great deal more than presentation to win with juries familiar with the best that can be done in rendering both the architecture and the entourage, otherwise Mr. Post's objection might be applied to Mr. Eggers. In the drawings for the Harding Memorial he was in great form and, whether we study only the rendering of the architecture (Figure 11) or the foliage and water (Figure 12), the part is as fine as the whole, and each a splendid model for the industrious student to follow, and to have a reproduction at hand when making an attempt at emulation. In a subject such as the Harding Memorial the planting is almost as important as the architecture. In most memorials it is more so because it often serves to hide architecture that is at its best when mostly "planted out".

The location of the building and its use will often, of course, determine whether the architecture should or should not be shown with accessories of landscape. For example, take the Prix de Rome design of Mr. Camille Lefèvre (Figure 13). The subject, a château d'eau—réservoir—with fountains for aération of the water: Mr. Lefèvre's chief competitor showed the architecture without the water, and rather neglected the landscape, contending that Versailles was better without its fountains than with them. Yet part of the problem was surely to design the arrangement of water and landscape to which, as Mr. Lefèvre evidently considered, the architecture of the structures was secondary.
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THE AMERICAN ACADEMY IN ROME.

FROM letters recently received by C. Grant La Farge, Secretary of the American Academy in Rome, from Frank P. Fairbanks, Professor in Charge, School of Fine Arts we quote the following:

"From Dr. Thomas Ashby an important collection of brick-stamps, stuccos and prehistoric objects. Alfred E. Hamill presented 500 lire for the Library. From Mrs. A. Cohn $100 for the Department of Music. "Professor Showerman, Director of the Summer School, is to arrive in Rome to-morrow, and on the 6th to begin his lectures. Sixty people seem a large number for one professor to handle, but Prof. Showerman will prove equal to the occasion."
If, instead of setting up the studs on the outside of a balloon frame the full length and cutting out window and door openings after sufficient sheathing had been nailed on to support the short pieces of studs, the studs had been cut accurately to length before assembling, a considerable saving could be accomplished. In the platform type it was found that the greatest amount of shorts was used but that these pieces were cut from 16' lengths. It is suggested that standard length studs be used of, probably, 7' 9", 8' 3", 8' 6", which would be a sufficient range to cover houses as usually constructed.

The place where a large number of short lengths was utilized was in sheathing, as a large percentage of the long lengths delivered on the job were cut to go between window and door openings. Economies have been affected, according to this report, by the use of car roofers 1 x 6 matched 5' 01/4" long, the studs being especially spaced to take this length. The report calls attention to the fact that the short lengths are more easily handled on roofs when the wind is blowing and that they can be applied much quicker if cut to exact length in multiples of 2', the rafters being spaced this distance.

Sub-flooring is another place where short lengths can be utilized. Laying the sub-floor at 45° to the joist uses a greater quantity of material, variously estimated at from 5% to 20%. A case where the sub-flooring was laid at an angle of 72½° was cited as producing satisfactory results with no more material than when the floor was laid at 90° to the joist.

There is some objection to using butt joints in porch flooring due to the liability of their retaining moisture, thus causing decay. As most porches are about 8' wide it would seem inadvisable to purchase this in shorter lengths.

Ceilings were found to contain more short lengths than any other item and it was found that 15" pieces were cut from 18' lengths. The practice of cutting these short pieces was common in nearly every job surveyed, though the lengths cut from were usually from 8' to 16'. A case is cited of using 8' car siding for ceiling, being spaced 2' on centers. In the opinion of several builders flooring should be made in multiples of 10" especially those pieces under 8'. A table showing construction use of short lengths of lumber is printed below.

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**CONSTRUCTION USES OF SHORT LENGTHS OF LUMBER**

**A NEW ATELIER**

D. Varon, Architect, 128 Madison Avenue, New York, announces that he will this Fall start an atelier where students may receive careful individual attention in their studies. Full particulars may be secured from Mr. Varon.

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**CONSTRUCTION USES OF SHORT LENGTHS OF LUMBER**

A mong the possible economies pointed out in the *Report of Survey by the Department of Commerce and General Committee on Lumber Standards* is the avoidance of the practice of lapping joints past each other on the girders or bearing plate. One house examined had 12% waste from this cause. Most of this could have been avoided had odd lengths been available. Where a large number of houses were being built in a row, with party walls, on lots 17' wide, joists and rafters had been cut from 18' lengths with a loss of 6% until a dealer procured 17' lengths. In the case of a house requiring 16' 6" rafters, where these were cut from 18' lengths, the waste was 8.3% which a 17' length would have reduced to 2.95%.

In broken roofs such as hips, jinkenhead and valley, more short lengths are required than for a plain gable roof. As the former generally have a better appearance than the latter the report recommends the building of this type and of gable roofs with dormers.
BOGUS SUBSCRIPTION AGENT CONVICTED!

WILLIAM H. SIBLEY; alias W. L. Hitchens; alias W. H. Lander; alias G. W. H. Ball; alias E. Matthews; alias E. Lane; who also operated under the name of The Allied Arts Service of Buffalo, New York, and Bridgeburg, Ontario, was convicted on five charges of theft against several architectural journals, and sentenced at Hamilton, Ontario, August 5, 1925, to two years imprisonment.

Herewith is a partial record of his activities during the past three years, as traced by a member of the staff of PENCIL POINTS.

In June, 1922, he stopped at the Reeta Hotel in Welland, Ontario, under the name of William H. Lander. After remaining there a week, he left suddenly owing a hotel bill of $35.00.

In July 1922 he went to Galt, Ontario, and began business under the name of William Sibley—The Empire Press, selling subscriptions for the Architectural Forum, which he later sent in from Bridgeburg, Ontario, with a worthless check signed by “W. L. Hitchens”.

After remaining in Galt for a month, he defrauded the Y. M. C. A. for four weeks' room rent by giving them a worthless check. His next appearance was in Buffalo, N. Y., where on Oct. 9, 1922, he was arrested under the names of W. H. Sibley, alias W. H. Linder, alias W. H. Ball, on a charge of forgery 3rd degree, and sentenced to three months in the Erie County Penitentiary—sentence suspended and ordered cut of city.

In 1923, he again operated in Buffalo under the name of G. W. H. Ball, selling subscriptions for PENCIL POINTS, etc. etc.

During the latter part of 1923, he went to Rochester, N. Y., and collected money for subscriptions for PENCIL POINTS under the name of W. L. Hitchens, and later sent them in with a worthless check signed “W. H. Lander”. In 1924, he sold subscriptions in Ottawa and Montreal, Canada, under the name of W. L. Hitchens, and later sent them in with a worthless check signed “William Sibley”.

In the Fall of 1924, he went to England and sold subscriptions for PENCIL POINTS at five dollars each (the regular price being only three dollars) under the names of E. Lane and E. Matthews, neglecting to send in any money for any of them, being so forgetful in such matters.

Returning to America in the Spring of 1925, he made his first appearance at Bridgeburg, Ontario, where he roomed for a month (March-April) under the name of G. W. H. Ball.

In June 1925, he transferred his activities to Niagara Falls, Ontario, where he registered at the Hotel Trennuck under the name of W. H. Lander. After remaining there a week he gave as payment for his hotel bill a worthless check drawn to W. H. Lander and signed “G. W. H. Ball”.

On June 25, 1925, he registered at the Y. M. C. A. in Hamilton, Ontario, as W. L. Hitchens, hired a typewriter for a month and proceeded to work the town.

One of his little pleasanties in Hamilton was to sell a subscription for the Architectural Forum in payment for which he received a check made payable to G. W. H. Ball, explaining that this was the man for whom he worked in Buffalo. This check was endorsed and cashed at the Bank in Hamilton on the same day he received it—July 4th.

After committing several other minor depredations in Hamilton, he was arrested, convicted and sentenced to two years' imprisonment, after pleading guilty to five charges of theft.

His previous criminal record as furnished by the Periodical Publishers' Association of America is as follows:

Extract No. 1—SIBLEY, WILLIAM B.—See Bennett, J. B.

Extract No. 2—BENNETT, J. B.—Reported in Bulletin No. 14, page 118—Alias Wm. Lander, A. B. Jones, Miss E. E. Norton, Mrs. L. B. Bradley, W. G. Maynard, C. J. Leonard, Otto J. Trelvily—After jumping his bail in May, 1914, in Waterbury, Conn., he started out on his career as before, viz.: securing fraudulent subscriptions and remitting with checks that were N. G. Worked throughout Connecticut. Arrested in Poughkeepsie, June 1916, and sentenced to serve ten days. He was taken to New Rochelle and was sentenced on June 21, 1916, to serve 11 months at 29 days for passing worthless checks.

If you have been defrauded in any manner by this man please send particulars to this office, also

BEWARE:

WE HAVE NO TRAVELLING SUBSCRIPTION AGENTS,

Do not subscribe for Pencil Points through any one not known personally to yourself.

NATIONAL EXPOSITION OF POWER AND MECHANICAL ENGINEERING

The Fourth National Exposition of Power and Mechanical Engineering will be held in the Grand Central Palace, New York, from November 30th through December 5th, 1925. This exposition is an important clearing house of information for the executives and engineers of all industries. At the coming show a series of exhibits of heating and ventilating machinery will form an important addition to the lines usually represented. The heating and ventilating problem is closely allied to the power problem of an industry and the advances in one art are generally applicable to the other. This innovation at the coming Show will, therefore, increase its value to the visitors who will find much of real worth in the exhibits of all phases of the heating and ventilating art. The Annual Meetings of The American Society of Mechanical Engineers and The American Society of Refrigerating Engineers will be held during the week of the Show. The managers of the Show are Fred W. Payne and Charles W. Roth, with offices in the Grand Central Palace, New York.

Answer to Puzzle Appearing on Page 96-9
ARCHITECTURAL TENNIS TOURNAMENT

The draw for the annual Architectural Tennis Tournament for the William Adams Delano trophy was made on August 1st and at the present time the playing is well under way.

Departing from the procedure of last year, the tournament is being run on the elimination basis, with a consolation tournament for those men defeated in the preliminary and first rounds, affording each man at least two matches. There were 48 entries in the singles representing 25 different offices; the following men being ceded:

- N. W. McBurney
- A. M. Koch
- H. W. Lawson
- G. B. Kayser
- N. W. McBurney, Peabody, Wilson & Brown
- A. M. Koch, E. R. Carpenter
- H. W. Lawson, E. R. Carpenter
- G. B. Kayser, Jas. G. Rogers

The draw for the doubles tournament, with fourteen teams entered, has also started and many good matches are expected.

The following prizes are to be awarded:

**Singles Tournament**
- Winner—Delano trophy and solid gold medal
- Runner-Up—Gold Filled Medal
- Semi-Finalists—Silver Medals
- Qualifying Round—Bronze Medals

**Doubles Tournament**
- Winners—Silver Cups
- Runners-up—Silver Medals

**Consolation Tournament**
- Winners—Silver Medals
- Runners-up—Bronze Medals

The finals of the three tournaments will be played on September 27th, at Mr. William Adams Delano's estate at Syosset, L. I.

ROME PRIZE AWARDED

The Rome Prize has recently been awarded to George Fraser and he has been appointed a Fellow in architecture. The award was made on a competitive basis, an eleven day preliminary competition was followed by a final one lasting four weeks. For the first competition the problem assigned was "A Monumental Entrance to a Park in a Large City". Of the twenty-three preliminary competitors ten were chosen for the finals, for which the subject was "A Design for a Stadium, Open Air Theatre and Water Gate for a University Situated on the Terrace of a River". This competition was held simultaneously at the University of California, Columbia, Cornell, Armour Institute, Chicago, and Ohio State University. The members of the Jury of Award were Wm. M. Kendall, Chairman, Louis Ayres, W. A. Delano, T. H. Ellett and Charles A. Platt. The stipend of the Fellowship is $1,250 a year. Mr. Fraser will remain at the Academy in Rome for a term of three years.

MEDAL OF S.A.D.G.F. AWARDED TO CATHOLIC UNIVERSITY OF AMERICA

The Medal, which is awarded every year by the American Group of the Société des Architectes Diplômés par le Gouvernement Français to the College or University obtaining the highest proportion of values in the work of the Beaux Arts Institute of Design, has been awarded to the Department of Architecture of the Catholic University of America, Washington, D. C. The Dean of the Department, Professor Frederick V. Murphy, was also the recipient of a personal letter of appreciation from the president of the Société, Mr. Chester Aldrich, following the announcement of the award through the Secretary, Mr. Edwin H. Danby.
PENCIL POINTS

WE ALWAYS like to get honest, first-hand expressions of opinion from our readers on any and all subjects in which they may be interested. We print here with an anonymous letter and shall be glad to have the writer disclose his identity—in fact we invite him to call at our office to discuss the subject of his communication:—

"PENCIL POINTS is a fine publication and it has a very well worth while ideal. But, why doesn't it go right to the roots?—

"It is made up of part 'instruction to draftsmen as to draftsmanship'—and part 'sociability'.

"Why not have an editorial page where somebody will tell the draftsmen the plain truth about the profession of architecture and the practice of it?

"And then, first, foremost and most important message to them should be that—for the sake of their health, wealth and happiness—it is essential that they so prepare themselves while they are draftsmen working for someone else, that, when they 'hang out their own shingles' they won't have to 'practice' the profession. They will know it.

"There are so many things—thousands of them—that the draftsman can learn when he is working for someone else and that are so essential to his knowledge before he starts in for himself—yet that he doesn't learn, because nobody has ever taken the trouble to point them out to him.

"And so—he learns them, year after year—while he is in business for himself—and at the expense of his client—and his own self respect. Troubles with clients, who discover that the architect doesn't know. Troubles with contractors, who discover it before the clients do. Broken morale—broken health because of worry—precarious clientele—poor finances—paying for ignorance, etc.

"Why? Oh ! Why?—shouldn't the draftsmen be told that they should learn 'building materials and methods'—specification writing—'supervision of construction' while they are 'working for somebody else'?

"Why should they be allowed to drift along in an office with the idea 'that that's all there is to it'. To 'work for three or four years, and then start in business'.

"When, what they should be doing is following a regular schedule of 'what there is to learn before our start in business'.

"Most of them would cut out the 'movies', auto rides, etc. and get down to business at once for they would see that getting there by just the day's work would be pretty slow business.

"There isn't one draftsman in a thousand who has any idea of what being a real architect entails or requires.

"Why leave these men to wake up at forty-five and realize that nobody bothered to set them right and that what they might have learned in four years—has taken them twenty and they have enough yet to learn to fill up the next twenty?"

"How about it, PENCIL POINTS?"

"P. S. Your first article in this month's (August) issue approaches the subject."
This working Drawing, Made in Pencil by Mr. Howells, when compared with the photograph on the opposite page, shows how exactly the appearance shown in the drawings is duplicated in the executed work.
A COMPARISON OF DRAWINGS WITH THE EXECUTED WORK

HOW closely it is possible to study the composition of a work of architecture in the drawings is shown by comparison of the working drawings and photographs of the residence at 820 Park Avenue, New York, of which John Mead Howells was the architect. On page is reproduced a half elevation of the Park Avenue front of this building, while on page is shown a photograph of the completed structure. In this case the composition is practically in one plane and consists only of the fenestration and two horizontal lines, extreme simplicity and flatness were sought. The stone work was erected directly from Mr. Howells' drawing and, with the exception of the wooden canopies introduced in the windows and the iron grilles below, which were not shown, the effect of the drawing and of the executed work are exactly the same.

In order that the design of the doorway as drawn by Mr. Howells may be compared with the finished doorway, this portion of the drawing showing this detail is reproduced here at larger size (about the same size as on the original drawing, which is at the scale of 1/4" = 1 ft.). This closer inspection shows that in detail as well as in general the elevation and the finished work are alike, a result much to be desired and that can be obtained only through full and proper study of the design and clear, correct indication of it on the drawing. In passing, it is interesting to note that, as a mezzanine floor goes through at the level of the stone transom bar the glass in the fan-light motive is of mirrors.

COMMITTEE ON "CUBING OF BUILDINGS" CREATED BY AMERICAN INSTITUTE OF ARCHITECTS

REALIZING that differences now exist among architects, contractors, appraisal organizations, bonding companies, and others concerned with the size and approximate cost of buildings as to the methods used in determining the cubical contents of any structure for estimating, appraisal and other purposes, the American Institute of Architects has appointed a committee to ascertain, codify and review the various methods now in use and prepare a report to the Scientific Research Department of the Institute.

This committee which is known as the "Sub-Committee on Cubing of Buildings" of the Structural Service Committee of the Institute is composed of D. Knickerbacker Boyd, Chairman, Dr. Warren P. Laird, Philadelphia and Dalton J. Snyder, Detroit.

It is the desire of the committee to receive the cooperation of all Associations, Companies and individual authorities in developing methods of cubing various buildings which may be accepted by the Building Industry and used by all as common basic factors.

Suggestions or information relating to this subject which will assist the committee and the industry will be welcomed. They should be sent to D. Knickerbacker Boyd, Chairman, 112 South 16th Street, Philadelphia, Penna.

A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

Architectural draftsman, graduate of a European College, with 4½ years' American experience on high class fireproof apartment houses and commercial buildings desires connection with established firm in New York City. Box 134, Pencil Points.

Draftsman—Free Lance, in New York City, to trace floor plans from architect's blue prints for reproduction in renting booklets. Only those who understand mercantile and apartment building plans need apply. Must be excellent letterer, able to draw single stroke block letter without serifs. Can be done in spare time at home. Box 135, Pencil Points.
Elevation of Doorway. Residence at the Northwest corner of Park Avenue and 75th Street (820 Park Avenue), John Mead Howells, Architect. Portion of drawing on page 92 showing how exactly the finished work may resemble the working drawing.
Residence at the Northwest corner of Park Avenue and 75th Street (820 Park Avenue), John Mead Howells, Architect. See working drawing on the opposite page.
PENCIL POINTS

Figure 2.

Figure 1.

Rubbings Made by Otto F. Cerny.
(see text on opposite page).
A NUMBER of interesting rubbings, which we have selected from among those brought back by Otto F. Cerny from his travels as Le Brun scholar, are printed in these pages. In response to a request for information about these rubbings, Mr. Cerny has written us a letter from which we quote the following:

"Regarding your request for the identification of the rubbings, I beg to inform you that to simplify matters they have been numbered.

"The first is a pulpit built in 1161, and is placed in an old church about fifteen feet from the tower of Chiesa dela Mortovana. It was very difficult to make the man in charge understand just what was desired, when I asked for permission to make this impression. Two lives and several demonstrations, together with the assurance that I did not want to purchase it, finally gave me the desired right on the following morrow in the absence of the priests.

"Due to my inexperience in making such copies, I was forced to hold the paper with one hand and rub with shoe-makers’ wax with the other.

"The second is an impression of a carved stone inserted on the inside wall of the same church.

"The third and fourth were taken from carved wooden confessional booths in an interesting modern Romanesque Church near via Piemonte and via Salustiana, Rome. Mr. Cummings, of Australia, was with me and together we rubbed all of the ornament and then cut the sheet in two so that each of us had a copy of every piece of ornament.

"Number five was taken from one of the numerous tombs in the Cairo museum. My letter from the American Academy in Rome assisted me in obtaining permission to do this. Not having seen the process before, the officials gathered, asking what I used and where such a material could be obtained, which fortunately was found in Cairo, This, they later said, would be invaluable to them for recording. Recent acquisitions are not to be reproduced nor are those from ‘King Tut’s’ tomb. The tombs average twenty-four feet in perimeter, so that a long piece of paper wound around and held by a string simplified matters.

"During the process of wrapping the paper around a tomb, an American lady inquired if they were sending it away, and if I would be so kind as to unwrap it so that she could give it one last look."

Figure 5. Rubbing made by Otto F. Cerny.
Figure 3.

Rubbings Made by Otto F. Cervy.
(see text on page 96a)
SUBSTITUTION

Editor, Pencil Points,

Dear Sir:

Your article on "Substitution" in July issue of Pencil Points is worthy of serious consideration. "Imitation is the sincerest form of flattery" and the very fact that such imitation is attempted speaks volumes for the high character of the article imitated. When we are told that a substitute is "just as good as the real thing" we must appreciate how very good that something must be, to be the standard for imitation.

In recent months a certain imported heavy Window Glass has appeared in this market. It is one-quarter inch in thickness and has been graded, in some instances, as a substitute for Polished Plate Glass. This glass is misleadingly called 'Demi-Plate' while, as a matter of fact, it is not Plate Glass in any manner whatsoever. The latter, as is generally known, is ground and polished, by an expensive process, after it is cast or drawn, which produces the unblemished and brilliant surface for which it is noted. This glass is obtainable in thicknesses ranging from 3/16 to 1/2 inches. The thickness of Polished Plate Glass most commonly used, it has been imposed upon the innocent buyer at the same price as the genuine article while its actual value is about one-half.

The substitution of one product for another should be made solely with the buyer's knowledge and consent and after all difference in quality, appearance, etc., have been fully explained. To assume the right of substitution "unbeknownst" to the purchaser is to perpetrate a fraud.

G. OSGOOD ANDREWS,

Eastern Representative.

The Plate Glass Manufacturers of America,
First National Bank Building
Pittsburgh, Pa.

PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.


Wroght Iron of Distinction. — Portfolio of 42 plates showing many steel and iron constructions.

Hydrox Specifications. — Documents covering built up roofs, sound deadening, damp-proofing for walls, etc.


The Fireproofing Handbook. — 8th Edition. As its name indicates this work covers fireproofing materials, their uses and application. Specifications, drawings, tables, etc. 8 1/2 x 11. The General Fireproofing Company, Youngstown, Ohio.

Waterproofing for Buildings. — New Catalog No. H-361. Covers subject indicated for the information of architects, engineers and specification writers. Specifications of pumps are described together with their capacities for application. 100 pp. 5 1/2 x 8 1/2. Fairbanks, Morse & Co., 8th and Wabash Ave., Chicago.

New York, July 23, 1925.

The article on "Substitution" appearing in your July issue is worthy of serious consideration. "Imitation is the sincerest form of flattery" and the very fact that such imitation is attempted speaks volumes for the high character of the article imitated. When we are told that a substitute is "just as good as the real thing" we must appreciate how very good that something must be, to be the standard for imitation.

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the second generation of the latter without loss of racial pride.

And we must bear in mind too that, with the Southern, are also shut out our British, Scandinavian and other European, that the latter under which the formerly created the majority of our skilled building mechanics. It is in place of these that the negro has migrated into our smaller northern cities where but few of the Latin races would have been attracted.

And, in some months, the number of the laboring element leaving our shores is greater than that coming in.

All this sounds far from germane to the subject under discussion but it is essential, if one is to attempt to judge the effect of supply and demand on any particular phase of employment, that one should appreciate the far-reaching consequences of public policy pertaining thereto.

This is our national stand as to immigration directly responsible to a considerable degree for the advance in cost of all we buy, the while it has not helped in any degree the income of the average professional man or shop keeper.

Since this be true, it is probably also true that, with a continuation of this present immigration policy, it will take at least a generation for a readjustment of the wage scales of brain and brawn workers unless, as many economists think, we are on the verge of a financial depression brought on by the instability of the farmer, the miner and the manufacturer to find sufficient and remunerative demand for their products.

Such a condition would have an immediate effect on building construction, as has already been the case in the Northwest, and would materially lower all building costs.

Where the professional man would find himself in the resultant readjustment is hard to prophesy, but it is safe to say that he will be no worse off than at present.

All of which is but to preface a constructive suggestion which the writer wishes to offer to those architects and draftsmen who, with so much industry, are the greatest gainers of the professional. I fear that there is little to be hoped from those architects who, in "pride of place", consider themselves in distinctly different class from their employers, using the latter only as so many cogs in the wheels of their success. It would be interesting to see one of these "heads of the profession" set about finding a remunerative job in the office of one of his competitors.

But, from those more-or-less-unselish individuals who delight in seeing others get ahead and take real pleasure in being factors in such success, there is hope for the draftsman who is conscientious and industrious and possessed also of those other attributes which make him a desirable workman, versatility, dependability, and last (but by no means least), loyalty.

For, as a draftsman, have not all of these, it is quite needless for you to look further for the cause of your lack of progress. Possessing each of them to a fair degree, you are probably doing well "as is", even though you may be justified in wanting to do much better. Should the foreman of a fair-sized drafting-room be satisfied with $100.00 a week, or a capable superintendent with $8.00 per, when one of the drafters on the job, by means of a little over-time, can draw $125.50? Perhaps, but I, for one, don't blame him if he isn't.

If you are the kind of a draftsman who, without much native ability, took any one of the many short-cuts in education in order to save the arduous foundation of the fundamentals, there is not much to be said for you except that you had best go back somewhere and complete your education before continuing your profession.

In the guilty of that most despicable of job-getting methods, under-bidding the other fellow. How diminutive must be the self-esteem of that employee in the knowledge which is stolen from someone else as good or better, simply by the process of accepting a smaller salary!

On the other hand, how contemptible is that selfishness which induces professional employers (however ethical) to agree not to tempt men from each other by the offer of higher wages! It is one of the few legitimate excuses for working cheap and should be prohibited from interfering with a man's privilege of securing the most for his abilities that the market will bring. Corollary: Every man should prove himself a candidate for a higher salary by striving to deliver to his employer a greater value than is being paid him.

Now, let us assume in an average office, a majority of employees who wish to better themselves and the office out, also to fortify themselves to some extent against that inevitable day when the payroll must be trimmed or the office cease to function.

Such organization is at present working thirty-eight to forty hours a week, with all holidays off, also a two-weeks annual vacation for all employees of a year's standing or longer. And, by the way, these holidays and vacations would prove a terrific drain on the overhead of any concern whose work schedule was fixed as to have the salaries absorb the resultant deductions. That is likewise inevitable. Again, "you can't eat your cake and have it too".

Let a majority of these employees with their employers get together on a platform of greater efficiency, increased flexibility and improved office loyalty. These betterments can be brought about by various means:

First, let us change the pay to an hourly basis by averaging it upon the actual number of hours in the year against the year's pay in order that both employer and employee may quaff "kidnapping themselves" as a case of lost time.

Then, in normal times, change the working day to begin at eight in the morning, allowing its afternoon duration to vary with the amount of work on hand, but eliminating working more than eight hours a day. By the end of the week permits, cut out all Saturdays before reducing the number of hours on other days. By working eight hours a day, each man would still put in as many hours a week as at the present schedule, be remunerated accordingly and yet have Saturdays free.

If work piled up, the afternoons could be extended an hour and, if that did not suffice, Saturdays be used also. This flexibility would reduce the number of transients in an office and increase its efficiency, not only by cutting down the "turnover" but by increasing the percentage of applica-

In any event, don't be guilty of that most despicable of suggestions in concrete form. I trust that some of these will find means of bettering their conditions.

For those of another and younger class who choose to accept small salaries for the "privilege" of working in certain offices on account of the prestige to be thus obtained, let it be said that such "prestige" is an absolute myth and they had far better take a smaller salary in a less-known organization where they can progress more rapidly and be in closer touch with their employers meanwhile. The next employer cares little for whom such a one has worked, provided he can only earn a little more money.

But, for that other class of youngsters in the game who are simply looking for an easy way of making a comfortable living, my advice is to get out of architecture and become a walking-cod or boot-legger or something else equally honest and remunerative.

Participants discuss. 
HAVING failed most dismally in our cunning scheme
to get somebody else to do the heavy work in carry­
ing on this department, we have decided to put the whole
proposition on a paying basis. We don’t see how it can be
made to pay Ye Editor as he doesn’t get a cent extra for
doing this job, and we don’t see how it can be made to pay
the magazine; so the only thing left, as we analyze the
situation, is to make it pay the contributors and the
readers.

So here’s what we’re going to do. We are going to of­
er prizes according to the following specifications. There
will be four monthly prizes of ten dollars each, to be
awarded as follows:

Prize No. 1 for the most interesting sketch received each
month. No conditions as to subject or medium used.
Sketches may be of any size and done in any manner
pleasing to the sketcher.

Prize No. 2 will be awarded to the most interesting
verse. It may be a couplet, or a tricyle; a limerick, an ode,
or a dithyramb; it may be blank verse or free verse, or
doggerel or anything whatever that has capitals at the
beginning of each line. It may deal with architecture or
astronomy or anything else.

Prize No. 3 will be awarded to the best cartoon or cari­
cature. No conditions as to subject or treatment. In
awarding this prize greater weight will be given to the
originality and cleverness of the idea, rather than to the
technique or draftsmanship.

Prize No. 4 will be awarded to the most interesting
item received each month not falling within any of the
above mentioned classifications. It may be an anecdote
or a witticism, or anything else which would find proper
place in this column, and we are to be the sole judge of
what is proper.

This stupendous contest starts with the month running
from September the fifteenth to October the fifteenth. All
contributions received between these dates will be con­
sidered for the prizes, whether they are actually selected
for publication in the November issue or held for later
use. The same dates will be observed for subsequent
judgments; that is, the second series of prizes will be
awarded for contributions received between November
fifteenth and December fifteenth, and so on until further
notice.

All drawings, whether awarded prizes or not, will be
promptly returned to the contestants.

Anyone may enter as many items as he wishes for one
or more months, whether he be a subscriber for Pencil
Points or not; and contributions from foreign countries
are quite as welcome as the domestic product.

Mark all contributions with the name of this depart­
ment and make sure that in all cases the name of the con­
tributor appears both on the wrapper and inside the
package.

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ment and make sure that in all cases the name of the con­
tributor appears both on the wrapper and inside the
package.
And here's a little contribution from our old friend, Oong Gow:

ARCHITECT'S LULLABY.

AFTER THE BOOK OF DIVERSION.

PEOPLE WHO PUT YOU TO SLEEP.

(As if anybody cared).

If, at night, you fail to slumber,
Count your "prospects" without number.
If you still continue wakeful,
Count the "stops" to make a lakeful.
Then, if your mind at random ranges,
Count the gooks who speak of changes.
And, if slumber still repel you,
Count those who change but never tell you.

OONG GOW.

Messrs. Lord and Taylor, Centennial Contest Department, Fifth Ave., New York, are offering prizes aggregating $3,000.00 for designs for a symbol. The first prize is $1,000.00. The competition closes October 15th, 1925. Comprehensive circular giving specifications and full details may be secured free on request.

And George H. Lathrop, of Rochester, N. Y., who is an electrical contractor, says, "Why does the architect locate on his drawings three switches where there isn't space for one. And why do they insist upon changing the base and trim of a door after the wiring and plastering has been completed?" And he further suggests that on all wiring plans and details of base and trim, all medicine cabinet sizes, etc., be included. We pass this on for what it is worth.

THE office of Messrs. Smith, Hinchman & Grylls, of Detroit, held a grand blow-out and party a little while ago, at which we are assured a good time was had by all. As one of the sporting events connected with the occasion an entirely original cross word puzzle was a feature. Here's the puzzle and on page 89 will be found the solution thereof. Lack of space only prevents us from reproducing other interesting documents which were produced by the office force to mark the event.

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Original Cross Word Puzzle sent to us from the office of Smith, Hinchman & Grylls, Detroit, Mich.
PENCIL POINTS


Pencil Sketch by W. K. Aykroyd, Toronto

Pencil Sketch by Albert Grazer, New York

Sketch by John J. Klaber, Notre Dame du Marthuret, Riom, France
Picture made by our staff photographer showing Madison Square on a midsummer's day, with "everybody" out of town. Crowd at right of picture shows group of exasperated architects and draftsmen trying to get into our office to subscribe for Pencil Points.
THE SPECIFICATION DESK
A Department for Specification Writers

SPECIFICATIONS
By W. W. Beach

PART XI.
Concrete Work—Continued.

The specifications for a Consolidated District School, upon which we are engaged, were carried, in Part X in the August issue, part way into Division C, Concrete Work. It will be noted that, in these specifications, certain words denoting dampproofing are included. A word here on this subject will not be out of place.

Whether or not the dampproofing of a basement or the waterproofing of its walls are needed must always be subject of special consideration, as must likewise be the question of the amount or completeness of either. In a few soils one can, in building basements of moderate depth, be assured of their continual dryness without any special precautions to keep them so.

At the time of securing his preliminary data on the site of any building, the architect should always, when ascertaining in a general way the probable bearing capacity of the subsoil, find out what moisture it carries during the various seasons. If possible, he should learn too whether or not such moisture, at the level of his future basement, is likely to have pressure back of it.

If hardpan be well down below the depth intended to go and the subsoil be yellow-clay or contains much sand or gravel, it is probable that rain water percolates straight down, without lateral pressure. But, if there be blue-clay, gumbo or other impervious layers, one may encounter considerable pressure behind the soil moisture may even find springs. On this account, an architect should supplement his observations at the site by finding out what the local experts have to say about it.

If the joint of much size, he will have borings made and test-holes dug and derive some information thus, but, while these will afford knowledge of use in designing footings, they will tell him less about conditions of moisture, because the latter vary to such an extent throughout the year.

Having, however, reached a conclusion that a certain degree of waterproofing must be provided, one can still wait until the excavating is under way before determining how much. Real waterproofing is expensive and should not be specified in any offhand manner. The following are various methods in common use, any one or all of which can be followed, dependent upon what is to be exacted.

(A) INTEGRAL WATERPROOFING. Our specifications (Par. C of Art. 2, Div. C) calls for all walls below grade to be rendered "impermeable" by an admixture of 8% of hydrated lime with other materials and integral waterproofing. The reason for incorporating this in all walls, instead of only in outside walls, is that if water lies in the ground around a building in certain seasons of the year in any considerable quantity, it has a tendency to find its way, through the action of capillarity, up through the footings of interior walls as well as exterior, frequently causing serious damage to plaster and decorating in basements and sometimes, on up into the stories above.

(B) PARGING. Outside walls can be painted with hot pitch or asphalt or any of several waterproof paints on the market. Important features in their application are that they be applied to clean surfaces and that every portion of all surfaces is covered. To this end, specifications should state that the work shall be in two coats or that it shall seal quite capably, or, if it does not seal, it shall seep into all small spots and crevices. The footings should be left uncovered so that the coating can be carried well down on same. This work should also be carried up to under-side of base-course, be same stone, tile, or other material covered. But here is the weak point in this waterproofing: it cannot be carried up on the face of the base-course as far as the soil is liable to lie, and a surface or course of the soil will have tendency to fill its way through the joint under base-course. If the paint can be carried through the joints under and behind the base-course, well and good.

(C) TARRED FELT. It appears sufficient, at times, to merely guard against the "seeping" of moisture through foundation walls up into those above by introducing a dampproof course of one or two thicknesses of tarred felt or composition roofing material. This should extend unbroken through the wall and project about 2" beyond both faces, and should be well lapped at all joints.

(D) MEMBRANE WATERPROOFING. To guard against water under pressure, either in walls or floors, nothing can be quite as effective as properly designed membrane waterproofing built into the building in layers between coatings of tar-pitch or asphalt of proper consistency. This should be absolutely continuous throughout all surfaces, with all corners rounded and reinforced with specially prepared fabric. Our discussion on waterproofing above is not a treatise on this subject, hence further detail will be left to the many excellent texts available.

(E) SUB-SURFACE DRAINAGE. Paragraphs A and B of Article 6, Division B, provide for the inspection of the area around foundation walls before backfilling is done. This gives opportunity for the architect to determine the need of protecting against water from rain-fall by the installation of open- or last-fall drainage system, with slight incline, along outside of footings and extending to a sump or sumps from which water can be conducted or pumped to an open drain or sewer, if available. Judiciously施策, such a layout can be so designed to take the place of a system of membrane waterproofing—and at a fraction of the cost of the latter.

(F) APPLIED WATERPROOFING. Fortunately, as a last resort, if it be found that more efficacious waterproofing is needed than one's economical program has provided, recourse can be had to the form of waterproofing sometimes known as "external". This is started by covering the courses of all seepages, cutting them out, directing the holes into tubes, plugging the tubes and then coating the walls with special waterproof plaster. This too is subject for more elaborate treatment. We will suppose that the subject of waterproofing as it relates to our consolidated district school building is of sufficient known quantity to warrant incorporating these schemes into our specifications: (1) an integral mix of 8% of lime in the walls, (2) parging on the outside and (3) the insertion of a damp-course in all basement walls. Then, (D) TARRED FELT shall be approved tar-saturated felt weighing not less than 14 lbs, per 100 sq. ft. For damp-proofing, approved ½-ply ready roofing may be substituted for the tarred felt.

ART. 7. PROPORIONING, MIXING AND PLACING.

(A) INSPECTION. No concrete mixing may be started without due notice to the Superintendent and opportunity given him to inspect the work from its beginning and to observe the surfaces covered. The work shall be clean and free from rubbish, washed, scraped and grouted, if so directed by the Superintendent.

(B) PROPORTIONS OF MIX of concrete shall be such as to make 1:2:4 for base floors laid on cinders. But here is the weak point in this waterproofing: it cannot be carried up on the face of the base-course as far as the soil is liable to lie, and a surface or course of the soil will have tendency to fill its way through the joint under base-course. If the paint can be carried through the joints under and behind the base-course, well and good.

(C) MEASURING. A systematic method shall be em-
played to insure the correct mixture of each batch. Measur­
ing by shovel is prohibited. Measuring of coarse and
fine aggregate and cement shall be by loose volume of which
shall be kept thoroughly wet after initial set and for at least
48 hours after pouring. For all concreting carried on dur­
ing this time, all special precautions shall be taken as
will obviate all danger of injury by frost. Only
boiling water and heated aggregates shall be used. Frost
shall be drawn from all surfaces with which fresh-laid con­
crete is to come in contact, by blowing with live steam or
covering with boiling water, or both. An adequate en­
closure heated by continually-fired salamanders shall be
maintained for the protection of such work after pouring
and same shall also be covered, while with straw
and tarpaulins. No concrete may be poured, except by
special permission, on days when the temperature at 9 a.
m. is less than 25° above zero. (E) MIXING. All concrete shall be mixed in rotating
batch-mixers, except that, under special conditions, the
Superintendent may permit small batches to be mixed by
hand. Under either method, the materials shall first be
thoroughly mixed and then their proper amount of water added
as indicated by the slump-test. A competent Foreman shall
be in constant attendance at each mixer to see to the cor­
rect proportioning and mixing of every batch produced.
Mixing shall be at a uniform speed of 6.5 ft. per minute and for a minimum of 1½ minutes after
water has been added, except that mixers of 2 or more
cubic yards capacity shall be operated for a minimum of 2
minutes after water has been added. Machine and hoppers
shall be thoroughly cleaned before being allowed to stand
idle. If tower is used for distributing, the spoutings shall be at proper incline to insure continuous and even flow of both
aggregates and liquid. (F) SLUMP-TEST. The Contractor shall provide a
conical form of No. 20 gauge galvanized iron for making
slump-tests; also a ¾" pointed metal rod 21" long. The
form shall be 4" in diameter at top, -S" at bottom and 12"
high. Tests shall be made by the Contractor once or twice
daily as directed by the Superintendent. Percentage of
water in concrete shall not be in excess of that to produce
the following maximum slumps:

<table>
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<th>Slump (in inches)</th>
<th>Type of Concrete</th>
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<tbody>
<tr>
<td>2</td>
<td>For mass concrete</td>
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<tr>
<td>3</td>
<td>For concrete columns</td>
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<tr>
<td>4</td>
<td>For reinforced slabs</td>
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<tr>
<td>5</td>
<td>For basc of floors and walls on earth</td>
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<td>2</td>
<td>For finishing coat</td>
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</table>

(G) CONCRETE shall be conveyed to points of
delivery in watertight carriers and deposited as nearly
as possible in final position immediately after mixing and
within 30 minutes after water has been added to the cement
and aggregates. Placing or undercutting of concrete
shall not be permitted and any concrete placed or
moved after the 30 minutes will be rejected and shall be
removed from the premises. Pouring shall be continuous
from working-joint to working-joint. Over-time labor
shall be provided for this purpose without charge when such
continuity cannot be otherwise secured. (H) JOINTING. The position of working-joints shall be as approved by the Superintendent and shall be rigidly
adhered to. In plan or mass concrete, working-joints shall
be left rough and, before placing new concrete, all
surfaces which have set shall have all soft or loose ma­
terials removed and the joints filled with a "x" layer of
Portland cement. Where piers or walls are 16" or more in thickness, wood blocks 4" x
4" x 18" shall be bedded in the concrete every 4" 0" when
leaving the wood in place. Blocks shall be laid along center line of
surface for removal before pouring additional concrete,
thus forming dowels. Each pier shall have at least one
such dowel in length, if necessary, so as not to be closer than 8" to any face of pier.

(I) COLUMNS shall be poured continuously from their
bottoms to underside of girders or column-heads, but no
faster than will permit careful rodding of each portion
deposited. (J) BEAMS AND SLABS over columns shall be poured
about 30 minutes after tops of columns supporting same.
Slabs shall be poured continuously with beams and girders
underneath.
members of same size, 2" 0" o. c. Reinforcing bars, where spliced, shall lap a distance equal to 60 diameters of the bars.

(B) BUILT-IN MEMBERS. All nosings, guards, curb-angles, anchor-plates, iron and bolt frames and other members, delivered by others to the Contractor under this Division, shall be placed in forms by him under direction of the Superintendent or as shown by drawings. Included in this are the anchor-plates or clips for floor and roof-sheathing strips. These shall be 12" and 16" o. c., respectively, one way, by 3" 0" in opposite direction, as ordered. Sleeves or other forms, required for all mechanical trades, will be provided and placed by Contractors under those Divisions. This Contractor shall afford all cooperation in connection with same and shall use all necessary protection for such members. Just before pouring, all sleeves shall be filled with sand or other material, to keep out concrete. After concrete is set, all wood boxes inserted for pipe openings shall be removed and, after all piping and concrete is set, all the boxes shall be removed and finished with cement mortar. Clips for furnishing in under side of second and third floor beams, and furring hangers from roof beams will be provided and set under Division I. and P. and a plasterer shall be given 48 hours notice when the forms are ready for same.

ART. 10. FORMS.

(A) IN GENERAL. The Contractor shall provide all required wood or other forms needed for the proper execution of all concrete work, plain and reinforced, and supply in such quantity that the work may be prosecuted without delay. Removable steel forms of No. 16 gauge metal, of approved design, may be used in place of wood for floor and roof slabs, at option of Contractor.

(B) STRENGTH of all forms shall be sufficient to carry the dead load of materials and construction operations without deflection or vibration. They shall be so braced as to be rigid under trucking and other action incidental to building. They shall be so designed as to be capable of needed adjustments, shall be carefully watched as work proceeds and all faults promptly corrected.

(C) SMOOTHNESS. Surfaces of forms in contact with concrete shall be of dressed lumber with tight joints, so built as to furnish, after removal, a true, smooth-finished concrete. Members and surfaces shall be straight and true to line; walls, columns and pilasters absolutely perpendicular; and all horizontal members free from slightest sag. Perfect finish will not be required of those surfaces exposed in basement or in ducts or those elsewhere which are to be concealed by subsequent construction. All such surfaces shall, however, be true to planes and profiles detailed.

(D) INSPECTION. Ample opportunity shall be given the Superintendent to examine all forms just before concrete is poured so that they shall be thoroughly cleaned from shavings, dirt or other rubbish, and shall be thoroughly drenched. Forms for vertical construction shall have opening in bottom left ready for pouring, to permit removal of rubbish and dirt.

(E) WRECKING OF FORMS shall not be started for 7 days after pouring concrete and none shall be done until the Superintendent gives consent and then only at sole risk of Contractor. After wrecking, sufficient struts shall remain to insure rigidity until final set.

ART. 11. TESTING.

(A) TWO TESTS of reinforced floor construction shall be made by the Contractor at his expense under direction of the Architect. Tests must show that the construction will support an equal to twice the sum of live and dead loads, without failure or excessive deflection. The construction may be considered part of test load. Each test load shall cover an area equal to length of span by 10' 0" wide and shall remain in place 24 hours. Total deflection under full test load at expiration of 24 hours shall not exceed 1/800 of the span.

(B) ADDITIONAL TESTS shall also be made by the Contractor at his expense in same manner as above, each time that test shows failure of a slab to meet the requirements.

(C) REPLACEMENT. Whenever a test develops defects in a slab, such slab shall be completely removed and replaced. The Contractor shall be responsible for meeting test requirements. All such removal and replacement and subsequent testing shall be at the expense of the Contractor.

ART. 12. WATERPROOFING.

(A) INTEGRAL. As specified in Par. C of Art. 2, all footings and basement concrete, except that in columns, shall be rendered with water and other material for the purpose, approved by the Architect.

(B) ON EXTERIOR WALLS. Wherever finished outside grade is above floor of basement, the outside surfaces of exterior walls and water-logs and base-ways shall be painted with a heavy coat of waterproofing as specified in Par. B. of Art. 6. Walls shall first be thoroughly cleaned and all loose articles removed. Painters shall extend foundations and up to finished grade and thoroughly cover all surfaces. After it is dry, all surfaces shall be carefully gone over and all thin, broken or otherwise imperfect coverings shall be liberally removed. Waterproofing shall be covered by fill until inspected and approved by the Superintendent.

(C) DAMP COURSES. Tops of all foundation walls shall be protected by a layer of damproofing as specified in Par. C of Article 4 for columns that are below all side courses, this course shall be laid at grade line so as to form continuous damproofness in connection with water-proof painting. Under inside walls, it shall be laid at level of basement floor. The Superintendent shall be permitted to inspect all dam courses. Before walls are started thereon, all corrections shall be made, if any are ordered by him.

PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.

Publications mentioned here will be sent free, unless otherwise noted, upon request, to readers of Pencil Points by the firm issuing them. When writing for these items please mention Pencil Points.

Kewanee Bolters.—Large catalog No. 50 covers bolters, garage burners, hot water heaters, storage and pressure tanks and cast iron equipment of all types and sizes, arranged for architects, specification writers and engineers. Kewanee Bolter Co., Kewanee, III.

Milling and Folding Door and Shutter Catalog No. 51. Complete catalog profusely illustrated, covering all types of equipment for various uses. 125 pp. 8 3/4 x 11. The Kinnear Mfg. Co., Columbus, Ohio.

Lally Columns vs. Rolled-Steel H-Columns.—Booklet displaying best type of column for a large variety of uses, illustrated with drawings, diagrams and facts. 16 pp. Lally Column Co. of Chicago, 4001 Wentworth Ave., Chicago, Ill.

Water Mixing Valves.—Illustrated handbook showing thermostatic water mixing valves for a variety of other uses. Diagrams and complete specifications. 75 pp. 7 1/2 x 10 1/2. Leonard Rooske Co., Providence, R. I.

Lithoprints, What They Are, How They Are Made, How They Are Used and How To Order Them. With full portfolio with samples. Useful in every drafting room. Standard filing size. Lithoprint Co. of New York, 30 East 42nd St., New York City.

Savings Home Construction Costs.—Technical booklet on this important subject. Long-Bell Lumber Co., R. A. Long Bldg., Kansas City, Mo.

Greenhouse Studies.—Series of renderings by Vahan Hagopian which includes plans, elevations, sections and structural features of all types of glass enclosures, solar bathing rooms, glass enclosed swimming pools, aviaries and children’s glassed-over play houses, as well as green houses of various types. A suitable binder will be furnished with first mailing. Lord & Burnham Co., 30 East 42nd St., New York City.


Historic Mahogany.—Brochure showing many beautiful designs of pieces of furniture done in Mahogany, Chippendale, Hepplewhite, Sheraton and in Mahogany, as used by the firm in Colonial Days in America are shown. Mahogany Association, 1143 Broadway, New York City.

Color Harmony in Floors.—Brochure illustrating in color, reproducing samples of various woods so as to show grain, color and texture. 32 pp. 9 x 11. Mfrs. Assn., Exchange Bldg., Chicago, Ill.

Flooring Specifications.—Series of books covering T-M-B flooring suitable for use in a wide variety of buildings. 8 1/2 x 11. Thomas Moulding Brick Co., 133 W. Washington St., Chicago, Ill.

Bull Bearing Door Hangers and Special Hardware.—Catalog No. 24. This handbook describes hardware for all types of sliding and folding doors, overhead carrying devices, barn-hinge bolts, tell bearing wheels, rolling ladders, etc. Fully illustrated, specification data, tables of sizes, full index. 60 pp. 9 1/4 x 11. McCabe Hanger Mfg. Co., 426 West 26th St., New York City.
A white door set in a wall of low-toned brick is one of the choicest delights to be found in domestic architecture. Contrast is the basis of this effect. Make the surrounding wall dark enough. Keep the wood free from tone where the sun floods it. Omit all but the essential details of the door. The shadow on the door is vital. It must be the right value. And its edge should be sharp—a hazy edge here would spell failure. Eat right into the paper with the 3B "Eldorado" Pencil to give the "pep" which the iron railing should contribute to the sketch. The vine provides a graceful stop for the drawing at the left. The vignette must do the trick at the right.
Without warning, human life may at any moment depend on the perfect action of a fire exit device. This thought is constantly borne in mind in the making of Von Duprin latches.

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